



State of Louisiana

**Coastal Protection and Restoration
Authority of Louisiana (CPRA)**

2016/2017 Annual Inspection Report

for

SABINE REFUGE MARSH CREATION PROJECT (CS-28-2) Permanent Pipeline



**State Project Number CS-28-2
Priority Project List 8**

June 15, 2017
Cameron Parish

Prepared by:

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I. Introduction

The Sabine Refuge Marsh Creation Cycle-2 Project was authorized by Section 303(a) of Title III Public Law 101-646, the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) enacted on November 29, 1990 as amended and approved on the first Priority Project List. The Sabine Refuge Protection Project has a twenty-year (20 year) project life, which began in April 2010.

The location of the pipeline is immediately south of the Hackberry community in Cameron Parish and runs perpendicular to LA State Highway 27, commencing near Mile 13.3 of the Calcasieu River Ship Channel and terminating at the northeastern corner of the Sabine National Wildlife Refuge. (See Appendix A). The pipeline corridor is approximately 30 feet wide.

The Sabine Refuge Marsh Creation Project Cycle II consists of approximately 3.54 miles (19,000 lft) of 29in. ID permanent pipeline, along with two fenced in temporary booster pump connections. Each temporary booster pump facility consists of an above ground 29in. ID flanged pipe spool with concrete saddle supports, six foot chain link fence with three strands of barbed wire (dimensions 80 feet by 20 feet), warning signs, and 12 foot double gate with padlock. Each pipeline terminus consists of a 29 inch ID long radius elbow extending above ground with a blind flange connection.

II. Inspection Purpose and Procedures

The purpose of the annual inspection of the Sabine Refuge Marsh Creation Cycle-2 Project (CS-28-2) is to evaluate the constructed project features to identify any deficiencies and prepare a report detailing the condition of project features and recommended corrective actions needed. Should it be determined that corrective actions are needed, CPRA shall provide, in the report, a detailed cost estimate for engineering, design, supervision, inspection, and construction contingencies, and an assessment of the urgency of such repairs. The annual inspection report also contains a summary of maintenance projects which were completed since completion of constructed project features and an estimated projected budget for the upcoming three (3) years for operation, maintenance and rehabilitation. The three (3) year projected operation and maintenance budget is shown in Appendix C. A summary of past operation and maintenance projects completed since completion of the Sabine Refuge Marsh Creation Cycle-2 Project (CS-28-2) are outlined in Section IV.

An inspection of the Sabine Refuge Marsh Creation Cycle-2 Project (CS-28-2) was held on June 15, 2017 under sunny skies and hot temperatures. In attendance were Darrell Pontiff, Jody White, and Mike Miller from CPRA, Chris Simon from Simon & Delany, and Tommy Todd, Stan's Airboat Service. Representatives from USACE and USFWS were unable to attend. The inspection began at the western booster station.

The field inspection included an inspection of all of the project features. Photographs were taken (see Appendix B) and Field Inspection notes were completed in the field to record measurements and deficiencies (see Appendix D).

III. Project Description and History

The purpose of the permanent pipeline is to transport dredged material from dedicated maintenance dredging within the vicinity of the pipeline to be beneficially used as marsh creation and marsh nourishment. The pipeline has previously been used in conjunction with the USACE maintenance dredging of the Calcasieu River Ship Channel for disposal as marsh creation on the Sabine National Wildlife Refuge. Future cycles on the Sabine Refuge are expected. The marsh creation projects proposed in the vicinity of the pipeline re-create brackish marsh habitat in the open water areas of interior marsh primarily caused by saltwater intrusion and freshwater loss.

Use of the pipeline is not restricted to marsh creation on the Refuge; future CWPPRA projects may be proposed outside of the Refuge. The current O&M Budget accounts for the USACE dredging cycles occurring approximately every two years. In addition, the cost for pipeline testing and potential pipeline maintenance prior to and during an executed CWPPRA or USACE related contract are accounted for in the O&M budget but private projects are not included. Therefore, testing costs would need to be addressed should private entities use the pipeline. Use of the pipeline by private entities would need to be discussed with the Federal Sponsors prior to approval.

The Coastal Protection and Restoration Authority (CPRA) along with the U.S. Dept. of Interior, Fish and Wildlife Service (FWS) and the U.S. Army, Corps of Engineers (USACE) are providing financial and technical support for operating the Sabine Refuge Marsh Creation Project (CS-28-2) Cycle II Permanent Pipeline.

The project goals and objectives are:

1. To assist with marsh creation through beneficial use of dredged materials.

IV. Summary of Past Operation and Maintenance Projects

Below is a summary of completed maintenance projects and operation tasks performed since April 2010, the construction completion date of the Sabine Refuge Marsh Creation Cycle-2 Project (CS-28-2). Proper maintenance is essential in achieving the long-term benefits envisioned and prescribed in the Operation and Maintenance Agreement. Expected maintenance activities over the life of the project include grass cutting along the pipeline corridor, paint repairs on the above ground features, pipe thickness and deformation testing prior to each use, pipeline repairs, and pipe maintenance during pumping.

General Maintenance:

Maintenance Contract (2015-2017) - CPRA is currently under contract with Simon and Delaney Resource Management for ROW and pipeline maintenance. The current cost annually is \$69,000. (2015-2017 Contract)

March 2015 – The Permanent pipeline was used in the construction of Sabine Refuge Marsh Creation Cycles 4 & 5. The dredging began November 2014 and ended March 2015. Prime Dredge Contractor was Mike Hooks, Inc. with Dean Equipment as a sub-contractor for containment dike construction. Additional PE and Pontoon pipe were installed to make up the length needed to dredge the Calcasieu Ship Channel Mile 10.5 to 15.0 and transport the material to the marsh creation areas. The pipeline was flushed and filled with water, and paint repairs were performed upon completion. The marsh creation project was in conjunction with the USACE routine dredging cycle and a joint effort between the USACE, USFWS, and CPRA.

Structure Operations: There are no active operations associated with this project.

V. Inspection Results

30 Inch Permanent Pipeline

The blind flange risers on each end of the pipeline are in good condition but do need some touching up at a few locations where rust is getting under the paint. Scraping and painting the localized areas of rust should prevent future problems. The above ground booster locations (east and west) are in good condition as well, and the grass and vegetation are maintained within the fenced areas. The remainder of the pipeline corridor (buried pipe) was inspected via airboat. No visible signs of erosion or leakage were apparent from the ground surface. There is no need for any additional maintenance at this time. (Photos: Appendix B, Photos 1 - 6)

Future USACE BUDMAT projects are expected to be advertised mid-2018 and be let out in 2019. A Scope of Work for the pipe testing contract will be required.

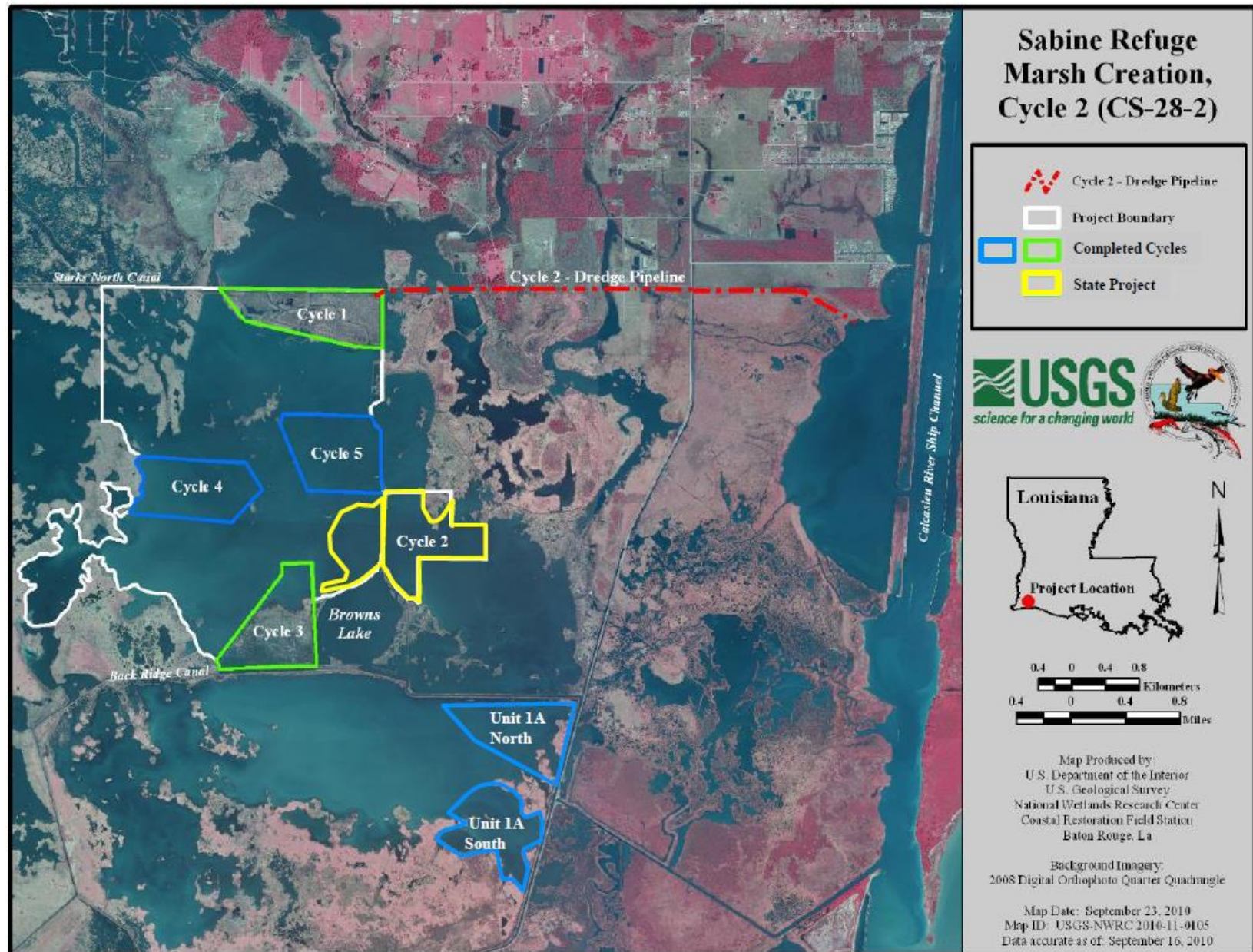
The pipeline maintenance contract will be re-advertised for award in January 2018.

VI. Conclusions and Recommendations

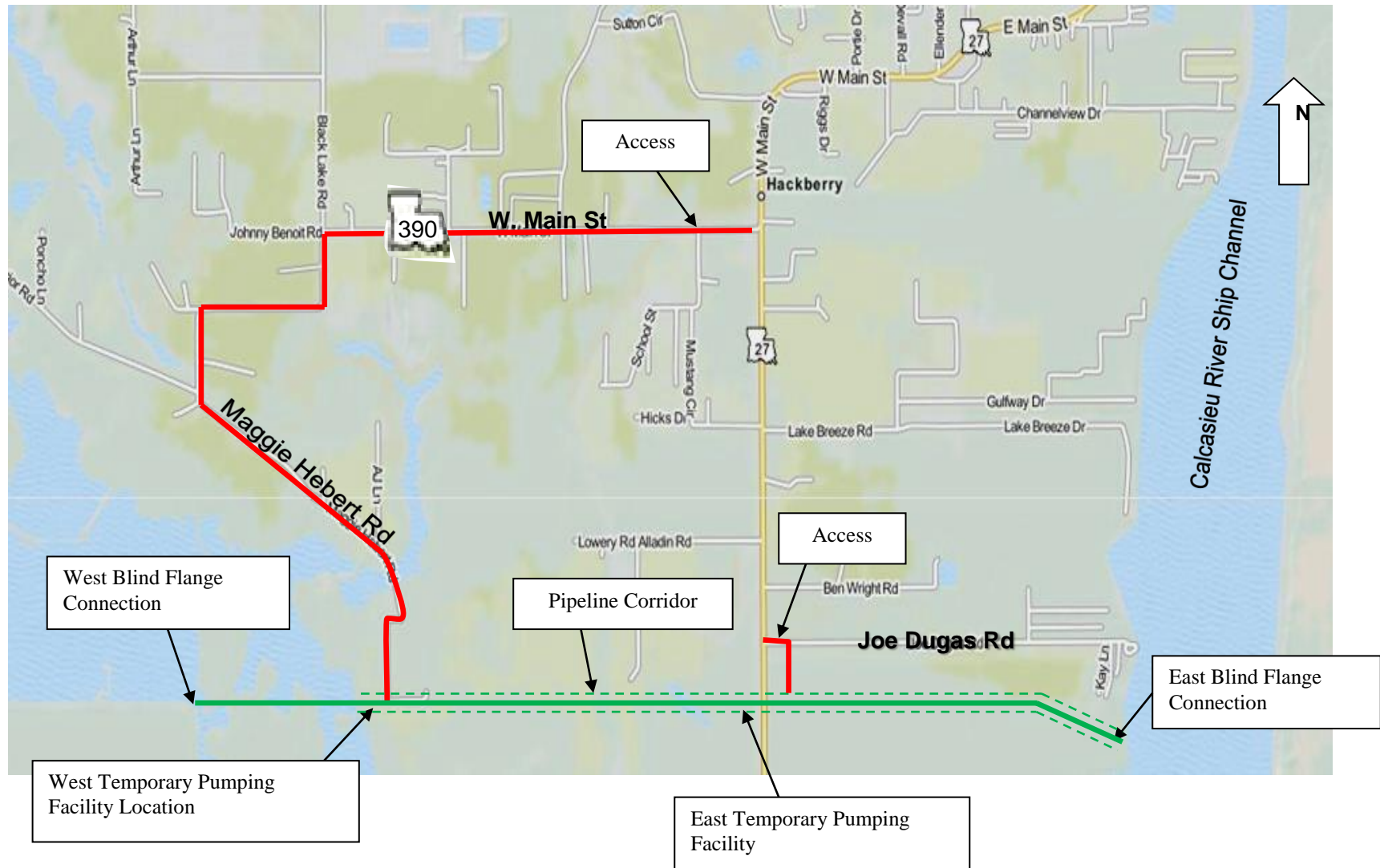
Overall, the Sabine Refuge Marsh Creation Cycle-2 Project (CS-28-2) is in excellent condition with the permanent pipeline functioning as designed. The USACE reported that during the 2015 event, the contractor encountered no problems while using the permanent pipeline and all went well during the work.

Appendix A

Project Features Map



PROJECT FEATURE LOCATIONS & ACCESS



Appendix B

Photographs



Photo No. 1, West end blind flange and riser



Photo No. 2, West end above ground booster station



Photo No. 3, East end blind flange and riser (Looking East)



Photo No. 4, East end blind flange and riser (Looking West)



Photo No. 5, East end above ground booster station



Photo No. 6, View of ROW, west end, looking east



Photo No. 7, View of ROW, east end, looking west

Appendix C

Three Year Budget Projection

Annual Inspection Report
SABINE REFUGE MARSH CREATION
State Project No. CS-28-2

SABINE REFUGE MARSH CREATION CYCLE 2/ CS-28-2 / PPL 8
Three-Year Operations & Maintenance Budgets 07/01/2017 - 06/30/2020

<u>Project Manager</u>	<u>O & M Manager</u>	<u>Federal Sponsor</u>	<u>Prepared By</u>
Darrell Pontiff	Darrell Pontiff	USACE	Darrell Pontiff

	2017/2018 (-4)	2018/2019 (-5)	2019/2020 (-6)
Maintenance Inspection	\$ 7,269.00	\$ 7,487.00	\$ 7,712.00
Structure Operation			
State Administration	\$5,000.00	\$ 5,000.00	\$ 5,000.00
Federal Administration		\$ -	\$ -
Maintenance/Rehabilitation	\$ 69,000.00	\$ 69,000.00	\$ 69,000.00

17/18 Description: Pipeline Inspection

E&D	
Construction	\$300,000.00
Construction Oversight	
Sub Total - Maint. And Rehab.	\$ 300,000.00

18/19 Description

E&D	\$ -
Construction	\$ -
Construction Oversight	\$ -
Sub Total - Maint. And Rehab.	\$ -

19/20 Description: Pipeline Inspection

E&D	\$ -
Construction	\$ 300,000.00
Construction Oversight	\$ -
Sub Total - Maint. And Rehab.	\$ 300,000.00

	2017/2018 (-4)	2018/2019 (-5)	2019/2020 (-6)
Total O&M Budgets	\$ 381,269.00	\$ 81,487.00	\$ 381,712.00

O & M Budget (3 yr Total)	\$ 844,468.00
Unexpended O & M Budget	\$ 3,320,451.00
Remaining O & M Budget (Projected)	\$ 2,475,983.00

Appendix D

Field Inspection Form

Annual Inspection Report
SABINE REFUGE MARSH CREATION
State Project No. CS-28-2

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: CS-28 Sabine Refuge Marsh Creation Cycle 2

Date of Inspection: June 15, 2017 Time: 9:30 AM

Structure No. N/A

Inspector(s): Darrell Pontiff, Jody White (CPRA)
Chris Simon (Simon and Delany), Tommy Todd (Stan's Airboats)

Structure Description: Permanent Pipeline

Water Level Inside: N/A Outside:

Type of Inspection: Annual

Weather Conditions: Sunny and hot

Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Steel Bulkhead / Caps	N/A				
Steel Grating	N/A				
Stop Logs	N/A				
Hardware	N/A				
Timber Piles	N/A				
Timber Wales	N/A				
ROW	Good			5-7	
Booster Locations	Good			2 & 5	
Pipeline Connection SNWR (West)	Good			1	
Pipeline Connection Calcasieu River E	Good			3 & 4	
Fencing	Good			2 & 5	

What are the conditions of the existing levees?

N/A

Are there any noticeable breaches?

N/A

Settlement of rock plugs and rock weirs?

N/A

Position of stoplogs at the time of the inspection?

N/A

Are there any signs of vandalism?

No